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SEQ ID NO:8
AC NO: AAT83989 Database: N_Geneseq-1101

CC The present invention describes a method for identifying a bacteriophage
CC coding region encoding a product active on an essential bacterial
CC target. The method comprises identifying a nucleic acid sequence encoding
CC a gene product that provides a bacteria-inhibiting function when an
CC uncharacterised bacteriophage infects a pathogenic bacterium. The
CC compound active on a target of a bacteriophage inhibitor protein in a
CC bacteria is used to treat or prevent a bacterial infection in an animal.
CC AAA68243 to AAA69442 and AAB16523 to AAB16954 represent bacteriophage
CC nucleotide and protein sequences which are used in the exemplification of
CC the present invention.
XX
SQ Sequence 41708 BP; 15607 A; 5898 C; 8088 G; 12115 T; 0 other;

Query Match 100.0%; Score 159; DB 21; Length 41708;
Best Local Similarity 100.0%; Pred. No. 7.7e-42;
Matches 159; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 atggtaaccaaagaatttttaaaaactaaacttgagtgttcagatatgtacgctcagaaa 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 34393 atggtaaccaaagaatttttaaaaactaaacttgagtgttcagatatgtacgctcagaaa 34452

Qy 61 ctcatagatgaggcacagggcgatgaaaataggttgtacgacctatttatccaaaaactt 120
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 34453 ctcatagatgaggcacagggcgatgaaaataggttgtacgacctatttatccaaaaactt 34512

Qy 121 gcagaacgtcatacacgccccgctatcgtcgaatattaa 159
|||||||||||||||||||||||||||||||||||||
Db 34513 gcagaacgtcatacacgccccgctatcgtcgaatattaa 34551

RESULT 4
AAC86106
ID AAC86106 standard; cDNA; 41708 BP.
XX
AC AAC86106;
XX
DT 29-AUG-2001 (first entry)
XX
DE Complete genome of bacteriophage 77.
XX
KW DnaI; S. aureus; inhibitor; bacteriophage 77; ORF 104; phage 77ORF104;
KW screening assay; ss.
XX
OS Bacteriophage 77.
XX
PN WO200146383-A2.
XX
PD 28-JUN-2001.
XX
PF 21-DEC-2000; 2000WO-US35180.
XX
PR 22-DEC-1999; 99US-0470512.
PR 12-OCT-2000; 2000US-0689952.
XX
PA (PHAG-) PHAGETECH INC.
PA (WILL/) WILLIAMS K M.
XX
PI Pelletier J, Gros P, Dubow M;
XX
DR WPI; 2001-418052/44.
XX
PT Novel DnaI polypeptides useful for treating and diagnosing microbial,
PT preferably bacterial, diseases such as those caused by Staphylococcus
PT aureus -
XX
PS Disclosure; Fig 2; 107pp; English.
XX
CC This sequence represents the genome of Bacteriophage 77. The
CC growth inhibitory gene product of ORF 104 interacts with DnaI derived
CC from S. aureus, to form the basis of a screening assay. DnaI
CC polypeptides and polynucleotides are useful for treating microbial,
CC preferably bacterial, especially Staphylococcal, infections. DnaI
CC polypeptides and polynucleotides are useful for biological, diagnostic,
CC prophylactic, clinical and therapeutic use, and as components in
CC databases useful for search analyses as well as in sequence analysis
CC algorithms.
XX
SQ Sequence 41708 BP; 15607 A; 5898 C; 8088 G; 12115 T; 0 other;

Query Match 100.0%; Score 159; DB 22; Length 41708;
Best Local Similarity 100.0%; Pred. No. 7.7e-42;
Matches 159; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 atggtaaccaaagaatttttaaaaactaaacttgagtgttcagatatgtacgctcagaaa 60
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 34393 atggtaaccaaagaatttttaaaaactaaacttgagtgttcagatatgtacgctcagaaa 34452

Qy 61 ctcatagatgaggcacagggcgatgaaaataggttgtacgacctatttatccaaaaactt 120
||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db 34453 ctcatagatgaggcacagggcgatgaaaataggttgtacgacctatttatccaaaaactt 34512

Qy 121 gcagaacgtcatacacgccccgctatcgtcgaatattaa 159
|||||||||||||||||||||||||||||||||||||
Db 34513 gcagaacgtcatacacgccccgctatcgtcgaatattaa 34551

RESULT 5
AAT83989
ID AAT83989 standard; DNA; 1134 BP.
XX
AC AAT83989;
XX
DT 27-AUG-1998 (first entry)
XX
DE DNA encoding a Staphylococcus aureus protein of unknown function.
XX
KW Staphylococcus aureus protein; ribozyme; antisense sequence; control;
KW Staphylococcal gene; regulatory element; bacterial gene expression;
KW vaccine; Staphylococcal infection; food poisoning; scaled skin syndrome;
KW toxic shock syndrome; ss.
XX
OS Staphylococcus aureus.
XX
FH Key Location/Qualifiers
FT CDS 593..946
FT /*tag= a
XX
PN WO9730070-A1.
XX
PD 21-AUG-1997
XX
PF 19-FEB-1997; 97WO-US02318.
XX
PR 20-FEB-1996; 96US-0011888.
XX
PA (SMIK) SMITHKLINE BEECHAM CORP.
XX
PI Black MT, Burnham MK, Hodgson JE, Knowles DJC, Nicholas RO;
PI Pratt JM, Reichard RW, Rosenberg M, Ward JM;
XX
DR WPI; 1997-424969/39.
DR P-PSDB; AAW28036.
XX
PT Novel polypeptide(s) from Staphylococcus aureus strain WCUH29 - used
PT to isolate antimicrobial compounds, and in vaccines against S.
PT aureus infection
XX
PS Claim 9; Page 797; 989pp; English.
XX
CC The present sequence encodes a Staphylococcus aureus protein of
CC unknown function. The present sequence was isolated from a
CC library of clones of S. aureus WCUH 29 in Escherichia coli. The DNA
CC sequence can be used in the construction of ribozymes and antisense
CC sequences to control the expression of Staphylococcal genes. The DNA

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CC   sequence is also useful as a source of regulatory elements for the
CC   control of bacterial gene expression. The encoded protein may be used
CC   to produce vaccines to enable a host to produce specific antibodies
CC   with antibacterial action. These vaccines and antibodies would protect
CC   a host against invasion by S. aureus, and conditions relating to
CC   Staphylococcal infection, e.g. Staphylococcal food poisoning, scaled
CC   skin syndrome, and toxic shock syndrome.
XX
SQ   Sequence 1134 BP; 407 A; 179 C; 247 G; 290 T; 11 other;


  Query Match             90.9%;  Score 144.6;  DB 18;  Length 1134;
  Best Local Similarity   94.3%;  Pred. No. 1.2e-37;
  Matches  150;  Conservative    0;  Mismatches    9;  Indels    0;  Gaps    0;

Qy       1 atggtaaccaaagaatttttaaaaactaaacttgagtgttcagatatgtacgctcagaaa 60
           ||||||||||||||||||||||||||||||||||||||||||||| ||||||||||||||
Db       5 atggtaaccaaagaatttttaaaaactaaacttgagtgttcagatgtgtacgctcagaaa 64

Qy      61 ctcatagatgaggcacagggcgatgaaaataggttgtacgacctatttatccaaaaactt 120
           |||||||| |||||||||||| || ||||| | ||| || ||||||||||||||||||||
Db      65 ctcatagacgaggcacagggagacgaaaacaagttatatgacctatttatccaaaaactt 124

Qy     121 gcagaacgtcatacacgccccgctatcgtcgaatattaa 159
           ||||||||||| ||||||||||||||||||||||||||
Db     125 gcagaacgtcacacacgccccgctatcgtcgaatattaa 163


RESULT   6
AAC76979
ID   AAC76979 standard; cDNA; 2023 BP.
XX
AC   AAC76979;
XX
DT   08-FEB-2001  (first entry)
XX
DE   Human ORFX ORF2534 polynucleotide sequence SEQ ID NO:5067.
XX
KW   Human; open reading frame; ORFX; detection; cytostatic; hepatotropic;
KW   vulnerary; antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
KW   anticonvulsant; osteopathic; antiarthritic; immunosuppressant; cardiant;
KW   immunostimulant; thrombolytic; coagulant; vasotropic; antidiabetic;
KW   hypotensive; dermatological; immunosuppressive; antiinflammatory;
KW   antiviral; antibacterial; antifungal; antirheumatic; antithyroid;
KW   antianaemic; gene therapy; cancer; proliferative disorder; hypertension;
KW   neurodegenerative disorder; osteoarthritis; graft vs host disease;
KW   cardiovascular disease; diabetes mellitus; hypothyroidism; SCID; AIDS;
KW   cholesterol ester storage; systemic lupus erythematosus; infection;
KW   severe combined immunodeficiency; malaria; autoimmune disorder; asthma;
KW   allergy; aplastic anaemia; nocturnal haemoglobinuria; burn; wound;
KW   bone damage; cartilage damage; antiinflammatory disease; coagulation;
KW   thrombosis; contraceptive; ss.
XX
OS   Homo sapiens.
XX
PN   WO200058473-A2.
XX
PD   05-OCT-2000.
XX
PF   31-MAR-2000; 2000WO-US08621.
XX
PR   31-MAR-1999;   99US-0127607.
PR   02-APR-1999;   99US-0127636.
PR   05-APR-1999;   99US-0127728.
PR   30-MAR-2000; 2000US-0540763.
XX
PA   (CURA-) CURAGEN CORP.
XX
PI   Shimkets RA,  Leach M;
XX
DR   WPI; 2000-602362/57.
DR   P-PSDB; AAB42770.
PT   Novel nucleic acids and peptides derived from open reading frame X,
PT   useful for treating e.g. cancers, proliferative disorders,
PT   neurodegenerative disorders and cardiovascular disease -
XX
PS   Claim 5; Page 4251-4252; 5507pp; English.
XX
CC   AAC74446 to AAC77606 encode the proteins given in AAB40237 to AAB43397,
CC   which represent the human ORFX open reading frames 1 to 3161. The ORFX
CC   sequences have activities such as: cytostatic; hepatotropic; vulnerary;
CC   antipsoriatic; antiparkinsonian; nootropic; neuroprotective;
CC   osteopathic; anticonvulsant; antiarthritic; immunosuppressant;
CC   immunostimulant; cardiant; thrombolytic; coagulant; vasotropic;
CC   antidiabetic; hypotensive; dermatological; immunosuppressive;
CC   antiinflammatory; antibacterial; antiviral; antifungal; antirheumatic;
CC   antithyroid; and antianaemic. The sequences can be used for determining
CC   the presence of or predisposition to, or preventing or treating
CC   pathological conditions associated with an ORFX-associated disorder. The
CC   nucleic acids can be used to express ORFX proteins in gene therapy
CC   vectors. The proteins and nucleic acids may be used to treat cancers,
CC   proliferative disorders, neurodegenerative disorders, osteoarthritis,
CC   graft vs host disease, cardiovascular disease, diabetes mellitus,
CC   hypertension, hypothyroidism, cholesterol ester storage, systemic lupus
CC   erythematosus, severe combined immunodeficiency (SCID), AIDS, viral,
CC   bacterial or fungal infection, malaria, autoimmune disorders, asthma,
CC   allergies, aplastic anaemia, burns, wounds, bone and cartilage damage,
CC   nocturnal haemoglobinuria, antiinflammatory disease; to enhance
CC   coagulation; to inhibit thrombosis; and as a contraceptive.
XX
SQ   Sequence 2023 BP; 585 A; 407 C; 449 G; 581 T; 1 other;


  Query Match             23.1%;  Score 36.8;  DB 21;  Length 2023;
  Best Local Similarity   58.0%;  Pred. No. 0.02;
  Matches   65;  Conservative    0;  Mismatches   47;  Indels    0;  Gaps    0;

Qy      15 atttttaaaaactaaacttgagtgttcagatatgtacgctcagaaactcatagatgaggc 74
           |||   || || |     || |||| || |||| ||| | || | || |||| || | ||
Db     774 attaaaaataaatgtgtatgtgtgtacatatatatacacacacatacacatatattatgc 833

Qy      75 acagggcgatgaaaataggttgtacgacctatttatccaaaaacttgcagaa 126
           |   || ||  | ||| || | |  |      |||| ||  || |||   | ||
Db     834 atgtggtgaaaagaattggctagatagggggatttttctgaacactgcaaaaa 885


RESULT   7
AAZ40489
ID   AAZ40489 standard; DNA; 3824 BP.
XX
AC   AAZ40489;
XX
DT   18-FEB-2000  (first entry)
XX
DE   Human SULU3 DNA.
XX
KW   Antirheumatic; antiathritic; antiinflammatory; antiallergic; osteopathic;
KW   antipsoriatic; antiarteriosclerotic; antiasthmatic; immunosupressive;
KW   neuroprotective; cardiant; cerebroprotective; cytostatic; antidiabetic;
KW   vulnery; STE20; protein kinase; STLK2; STLK3; STLK4; STLK5, STLK6, STLK7;
KW   ZC1, ZC2, ZC3, ZC4, KHS2, SULU1, SULU3, GEK2, PAK4; PAK5; antagonist;
KW   antibody; gene therapy; rheumatoid arthritis; artherosclerosis; asthma;
KW   inflammatory bowel disease; Crohn's disease; osteoarthritis; psoriasis;
KW   rhinitis; autoimmunity; organ transplantation; multiple sclerosis;
KW   myocardial infarction; cardiovascular disease; stroke; renal failure;
KW   oxidative stress-related neurodegenerative disorder; Parkinson's disease;
KW   amylotrophic lateral sclerosis; Leigh syndrome; cancer; cardiomyopathy;
KW   ischemic disorder; inflammation; diabetes mellitus; fibrosis; mitosis;
KW   mesangial disorder; growth regulation; wound healing; T cell activation;
KW   immunosuppressant; ss.
XX
OS   Homo sapiens.
XX
PN   WO9953036-A2.
XX
```

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09/407804

L26 ANSWER 1 OF 4 CAPLUS COPYRIGHT 2002 ACS
AN 2001:472892 CAPLUS
DN 135:97410
TI Sequence of Staphylococcus aureus DnaI protein domain interacting with S. aureus **bacteriophage 77** ORF 104 protein, and its uses in drug screening, diagnosis and therapy
IN Pelletier, Jerry; Gros, Philippe; Dubow, Michael
PA Phagetech, Inc., Can.; Williams, Kathleen M.
SO PCT Int. Appl., 107 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2001046383	A2	20010628	WO 2000-US35180	20001221
	WO 2001046383	A3	20020103		

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

PRAI US 1999-470512 A 19991222
US 2000-689952 A 20001012

L26 ANSWER 2 OF 4 CAPLUS COPYRIGHT 2002 ACS
AN 2000:384488 CAPLUS
DN 133:39115
TI Development of novel antimicrobial agents based on bacteriophage genomics
IN Pelletier, Jerry; Gros, Phillippe; Dubow, Michael
PA Phagetech, Inc., Can.
SO PCT Int. Appl., 456 pp.
CODEN: PIXXD2
DT Patent
LA English
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 2000032825	A2	20000608	WO 1999-IB2040	19991203
	WO 2000032825	A3	20010118		

W: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM
RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

	EP 1135535	A2	20010926	EP 1999-958449	19991203

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

PRAI US 1998-110992P P 19981203
US 1999-326144 A 19990603

US 1999-407804	A	19990928
US 1999-157218P	P	19990930
US 1999-168777P	P	19991201
US 1999-454252	A	19991202
WO 1999-IB2040	W	19991203